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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,286	02/06/2004	Kerwin D. Dobbs	UC0405USCIP	8498
23906 7590 02/27/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER YAMNITZKY, MARIE ROSE	
			ART UNIT	PAPER NUMBER
			1774	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/27/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/774,286

Applicant(s)

DOBBS ET AL.

Examiner

Marie R. Yamnitzky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,9,10,12-14 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,9,10,12-14 and 17-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. This Office action is in response to applicant's amendment filed December 15, 2006, which amends the specification, amends claims 1, 9, 10 and 18, cancels claims 3-8, 11, 15 and 16, and adds claims 20 and 21.

Claims 1, 2, 9, 10, 12-14 and 17-21 are pending.

2. The terminal disclaimer filed on December 15, 2006, disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application No. 11/315,741 or any patent granted on Application No. 10/650,323, has been reviewed and is accepted. The terminal disclaimer has been recorded.

3. The rejection under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, is overcome by claim amendment.

The rejection under 35 U.S.C. 102(b) based on Petrov et al. (WO 02/02714) is overcome by claim amendment.

The rejection under 35 U.S.C. 102(e) based on Herron et al. (US 2005/0048312) is overcome by claim amendment.

The rejection under 35 U.S.C. 103(a) based on Petrov et al. (WO 02/02714) is withdrawn. The rejection is moot with respect to the cancelled claims, and otherwise pertains to claim limitations that are addressed by other prior art rejections. The examiner also notes that if a grantable petition is filed in the present application to claim priority based on U.S. Application No. 09/879,014 and U.S. Provisional Application Nos. 60/224,273 and 60/215,362, Petrov's PCT publication will not constitute prior art against the present claims. (Petrov's PCT

application claims priority of the same provisional applications, and the disclosure of Petrov's PCT application corresponds to that of U.S. Application No. 09/879,014.)

The provisional rejection of claim 18 under 35 U.S.C. 101 as claiming the same invention as that of claim 15 of copending Application No. 11/315,741 is overcome by amendment of present claim 18.

The provisional obviousness-type double patenting rejection based on copending Application No. 11/315,741 is overcome by the terminal disclaimer filed December 15, 2006.

The provisional obviousness-type double patenting rejection based on copending Application No. 10/650,323 is overcome by the terminal disclaimer filed December 15, 2006. Separately, the provisional obviousness-type double patenting rejection based on the '323 application is also overcome by claim amendment.

4. The amendment filed December 15, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The claim to priority based on U.S. Serial No. 09/879,014 and U.S. Provisional Application Nos. 60/224,273 and 60/215,362.

While the present application as originally filed claimed priority to Application No. 10/336,295 as being a CIP of the '295 application, no reference was made to the earlier filed '014 non-provisional application or the '273 and '362 provisional applications to which the '295

application claims priority. Accordingly, as originally filed, the present application did not claim the benefit of the '014 non-provisional application or the '273 and '362 provisional applications.

See MPEP 201.11.

If applicant desires to claim the benefit of a prior-filed application under 35 U.S.C. 119(e), a specific reference to the prior-filed application in compliance with 37 CFR 1.78(a) must be included in the first sentence(s) of the specification following the title or in an application data sheet. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications.

Since the instant application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application (emphasis added). See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date

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the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Applicant is required to cancel the new matter in the reply to this Office Action, or file a grantable petition as described in the preceding paragraph.

5. Claims 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In view of claim 21, the scope of "heptafluoro-acac" as recited in claim 20 is not clear. If claim 21 properly further limits claim 20, then "heptafluoro-acac" encompasses more possibilities than 1,1,1,3,5,5,5,-heptafluoro-2-4-pentanedionate, but the scope of those other possibilities is not clear. (If "acac" stands for "acetylacetonate", then the only possibility for heptafluoro-acac is 1,1,1,3,5,5,5,-heptafluoro-2-4-pentanedionate and claim 21 does not further limit claim 20.)

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 2 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ise et al. (EP 1 175 128 A2).

See the whole document. In particular, see formulae (K-9), (K-10), (K-15) and (K-19) on pages 83 and 84.

Each of the specific iridium compounds represented by the formulae referenced above meets the limitations of a compound having Formula I as defined in present claim 1 and further defined in present claim 2.

With respect to present claims 12-14, Ise's iridium compounds may be used in the light-emitting layer of an organic electronic device, and the light-emitting layer may comprise a diluent. Any of Ise's iridium compounds of the formulae referenced above can be used for the same purpose as (K-1) or (K-3) as in Ise's specific device examples.

(The examiner notes that even if a grantable petition is filed with respect to the added claim for priority based on 09/879,014, Ise et al. will still be available under 35 U.S.C. 102(b) for species not supported by the earlier priority application(s), such as compounds having formula (I) wherein  $R^1 = N(R^4)_2$  as in Ise's compound of formula (K-15).)

8. Claims 1, 2 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Igarashi (US 2002/0134984 A1).

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The examiner considers the effective filing date with respect to compounds of present formula (I) wherein  $R^1 = N(R^4)_2$  to be January 30, 2004. The earlier priority application, 10/366,295, does not explicitly disclose  $N(R^4)_2$  as a substituent for the phenylpyridine ligand (nor do any of the applications from which 10/366,295 claimed priority).

Igarashi discloses iridium compounds represented by present Formula I wherein  $R^1$  is  $N(R^4)_2$  wherein  $R^4$  is an alkyl group, each of  $R^2$  and  $R^3$  is H, m is 2, y is 1 and  $L'$  is a monoanionic bidentate ligand that is not a phenylpyridine, phenylpyrimidine or phenylquinoline. See (1-331), (1-332), (1-333) and (1-345) on pages 31 and 33. These compounds meet the limitations of the compound required by present claims 1, 2 and 12-14.

Igarashi's compounds are disclosed for use in the light-emitting layer of an electronic device (e.g. see paragraphs [0075]-[0076]).

9. Claims 1, 2 and 12-14 are rejected under 35 U.S.C. 102(b) or 102(e) as being anticipated by Igarashi (US 2002/0134984 A1).

Compounds of present formula (I) wherein  $m = 2$ ,  $R^1 = H$ ,  $R^4$  or  $OR^4$  wherein  $R^4$  is alkyl,  $R^2 = H$ ,  $C_nF_{2n+1}$  or CN, and  $R^3 = H$ ,  $C_nF_{2n+1}$  or CN are partially supported by priority application No. 10/366,295 (and 09/879,014 from which the '295 application claimed priority), which teaches that the substituted phenylpyridine ligands having at least one fluorine or fluorinated group as a substituent may also have one or more substituents selected from "conventional substituents...such as alkyl, alkoxy...and cyano groups". However, the '295 application (and the '014 application) does not disclose any specific examples of compounds within the scope of



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the present claims wherein  $R^1$  is an alkyl or alkoxy group (i.e. wherein  $R^1 = R^4$  or  $OR^4$  wherein  $R^4$  is alkyl). The priority application filed January 30, 2004 provides specific examples of such compounds.

Igarashi discloses iridium compounds represented by present Formula I wherein  $R^1$  is  $R^4$  or  $OR^4$  wherein  $R^4$  is an alkyl group, each of  $R^2$  and  $R^3$  is H, m is 2, y is 1 and L' is a monoanionic bidentate ligand that is not a phenylpyridine, phenylpyrimidine or phenylquinoline. See (1-208), (1-301) through (1-305), (1-308), (1-312) through (1-315), (1-318), (1-323) through (1-330), (1-334) through (1-338), (1-344), (1-346), (1-347), (1-349) and (1-360) on pages 21-34. These compounds meet the limitations of the compound required by present claims 1, 2 and 12-14.

These compounds are disclosed for use in the light-emitting layer of an electronic device (e.g. see paragraphs [0075]-[0076]).

Since the '295 priority application (and earlier applications from which the '295 application claims priority) does not provide full support for compounds defined by present formula I which are met by the above identified compounds of Igarashi, it is the examiner's position that Igarashi's disclosure is available as prior art under 35 U.S.C. 102(b). In the event that applicant persuades the examiner that the '295 application (and the '014 application) provides sufficient support for the compounds defined by formula I which are met by the above identified compounds of Igarashi, Igarashi's disclosure still represents prior art under 35 U.S.C. 102(e) if a grantable petition is not filed with respect to the added claim for priority based on 09/879,014.

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10. Claims 1, 2, 10 and 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Grushin et al. (US 6,919,139 B2).

Grushin et al. disclose iridium compounds represented by present formula 1 wherein  $R^1$  is H or  $R^4$  wherein  $R^4$  is an alkyl group, each of  $R^2$  and  $R^3$  is H, m is 2, y is 1, and L' is a monoanionic bidentate ligand within the scope of present claim 10. Grushin et al. disclose these compounds for use in an electronic device. For example, see Figs. 1A, 1B, 2A, 2B, 3 and 4, column 1, line 66-c. 2, l. 22, c. 6, l. 16-24, c. 6, l. 57-c. 8, l. 4 and the claims. Compounds 2-a, 2-b, 2-c, 2-d, 2-k, 2-n and 2-u meet the limitations of the compound required by present claims 1, 2, 10 and 12-14.

11. Claims 1, 2 and 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Ma et al. (US 6,916,554 B2) or Thompson et al. (US 7,011,897 B2).

See the entire patent to Ma et al. In particular, see column 2, lines 41-67, c. 9, l. 4-c. 12, l. 30, Table 1 (c. 18) and the claims.

Ma et al. disclose emissive materials for use in the emissive layer (active layer) of an organic light emitting device (an electronic device). The emissive layer may comprise components in addition to the emissive material. Compounds 10 and 12 as defined in Table 1 of the Ma patent meet the limitations of the compound required by present claims 1, 2 and 12-14.

See the entire patent to Thompson et al. In particular, see column 3, line 27-c. 4, l. 57, c. 13, l. 3-c. 16, l. 49, Table 1 (c. 27-30) and the claims.

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Thompson et al. disclose emissive materials for use in the emissive layer (active layer) of an organic light emitting device (an electronic device). The emissive layer may comprise components in addition to the emissive material. The compounds used in Examples 3, 4, 13 and 17 of the Thompson patent meet the limitations of the compound required by present claims 1, 2 and 12-14.

12. Claims 1, 2, 12-14 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamatani et al. (US 6,953,628 B2).

See the whole patent. In particular, see column 5, line 18-c. 6, l. 25, c. 11, l. 24-c. 13, l. 50, No. 387 in Table 1-7 (c. 27-28) and Nos. 612 and 616 in Table 1-11 (c. 33-34). Prior art compound Nos. 612 and 616 meet the limitations of the compound required by present claims 1, 2 and 12-14. Compound Nos. 387 and 612 are derived from the compound of present claim 19.

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ise et al. (EP 1 175 128 A2) as applied to claims 1, 2 and 12-14 above, and further in view of Igarashi et al. (US 2001/0019782 A1).

Ise's compounds of formulae (K-9), (K-10), (K-15) and (K-19) are similar to the compound required by present claim 9, with the exception that the prior art compounds have hydrogen at the position corresponding to R<sup>6</sup> in present formula III.

Igarashi et al. disclose iridium compounds to be used in a light-emitting device similar to those disclosed by Ise et al. Based on the  $\beta$ -enolate structure disclosed with reference to formula (23) in Igarashi's published application (e.g. see paragraphs [0114] and [0117]), one of ordinary skill in the art at the time of the invention would have reasonably expected that a  $\beta$ -enolate ligand having a substituent (i.e. something other than hydrogen) at the position corresponding to present R<sup>6</sup> could be used in place of a  $\beta$ -enolate ligand having hydrogen at R<sup>6</sup>. It would have been an obvious modification to one of ordinary skill in the art at the time of the invention, having knowledge of Igarashi's disclosure, to make compounds similar to Ise's compounds of formulae (K-9), (K-10), (K-15) and (K-19) having other substituted  $\beta$ -enolate ligands that would reasonably be expected to be useful for the same purpose as the  $\beta$ -enolate ligands of Ise's compounds.

15. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al. (US 6,916,554 B2) or Thompson et al. (US 7,011,897 B2) as applied to claims 1, 2 and 12-14 above, and for the further reasons set forth below.

Neither prior art reference explicitly discloses the compounds of present claim 17 or 19, though such compounds provide ligands within the scope of the substituted phenylpyridine ligands required by the prior art references. Likewise, neither prior art reference discloses the

iridium compounds of present claim 18 though such compounds are within the scope of the prior art and the compound of formula XIII in claim 18 is particularly suggested by the prior art teachings.

Absent a showing of superior/unexpected results provided by a particular substituted phenylpyridine ligand and/or a particular combination of substituted phenylpyridine ligand and ancillary ligand(s), it is the examiner's position that it would have been within the level of ordinary skill of a worker in the art, guided by the teachings of Ma et al. or Thompson et al., to determine suitable combinations of substituents for the phenylpyridine ligand and suitable combinations of substituted phenylpyridine ligand and ancillary ligand(s). For example, regarding compounds wherein  $R^2$  is  $CF_3$  such as in the compounds of formula IX and XII of present claim 17, XIII of present claim 18, and VIII of present claim 19,  $CF_3$  meets the Hammett value limitation required for the substituent at the corresponding  $R_3$  position of Ma's compounds, and  $CF_3$  is specifically disclosed as usable for the substituent at the corresponding position of Thompson's compounds. Regarding the  $NMe_2$  substituent on the pyridine ring in present formulae IX and XII, a dialkylamino group at the corresponding position is taught as suitable for the  $R'$  substituent in the prior art compounds (e.g. see c. 10, l. 26-35 of the Ma patent and c. 14, l. 28-37 of the Thompson patent). Thompson et al. also disclose a specific example of an iridium compound having a phenylpyridine ligand with  $NMe_2$  at the corresponding position (the compound used in Thompson's Example 13).

Further with respect to the requirement of present claim 18 that the compound has blue luminescence, both prior art references teach blue emission.

16. Claims 9, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamatani et al. (US 6,953,628 B2) as applied to claims 1, 2, 12-14 and 19 above, and for the further reasons set forth below.

Kamatani et al. do not disclose a specific example of a compound of formula I wherein L' is a  $\beta$ -enolate having formula III as in present claim 9, or wherein L' is the  $\beta$ -enolate heptafluoro-acac as in present claims 20 and 21. Kamatani's compounds 612 and 616 are similar compounds wherein L' is an iminocarboxylate ligand. Kamatani et al. teach that  $\beta$ -enolate ligands such as those of formula III in present claim 9 can be used in place of the iminocarboxylate ligand (e.g. see formulae 4 and 5 in c, 5-6, which represent iminocarboxylate and  $\beta$ -enolate ligands, respectively). Kamatani et al. disclose specific examples of compounds having heptafluoro-acac as a ligand (e.g. see compound No. 475 and similar compounds wherein each of E and G is CF<sub>3</sub> and J is F.) It would have been an obvious modification to one of ordinary skill in the art at the time of the invention to make compounds similar to compounds 612 and 616, but having a  $\beta$ -enolate ligand in place of the iminocarboxylate ligand, with the expectation that compounds similar in structure and comprising ligands disclosed by Kamatani et al. would be suitable for the purposes of the prior art.

17. Applicant's arguments filed December 15, 2006 have been fully considered but they are not persuasive.

Applicant states that claim 1 has been amended to incorporate limitations from claims 4 and 8. The examiner notes that while claims 4 and 8 have been cancelled by the December 15<sup>th</sup> amendment, only the limitations of claim 4 have been incorporated into claim 1.

Applicant also states that there was no art-based rejection to claim 10 in the Office action mailed June 15, 2006. This is incorrect. Claim 10 was (and is) rejected under 35 U.S.C. 102(e) as anticipated by Grushin et al. (US 6,919,139).

With respect to the 35 U.S.C. 102(b) rejection based on Ise et al., applicant argues that the claimed L' ligands are distinct from any disclosed by Ise et al. This argument is not persuasive because the claims rejected as anticipated by Ise et al. limit L' to a monoanionic bidentate ligand that is not a phenylpyridine, phenylpyrimidine or phenylquinoline. Ise's compounds of formulae (K-9), (K-10), (K-15) and (K-19) each comprise a  $\beta$ -enolate ligand that meets the limitations of L' as required by claims 1, 2 and 12-14.

With respect to the 35 U.S.C. 102(b) and 102(b)/102(e) rejections based on Igarashi, applicant argues that the reference is not applicable because N-analogs of  $\beta$ -enolate ligands have been cancelled from the pending claims. This argument is not persuasive because Igarashi's compounds of the formulae referenced in the rejections each comprise one ligand that meets the limitations of L' as defined in present claim 1, with claims 2 and 12-14 dependent therefrom. The ligand that coordinates through two nitrogens in each of the compounds of the referenced formulae is a monoanionic bidentate ligand that is not a phenylpyridine, phenylpyrimidine or phenylquinoline.

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With respect to the 35 U.S.C. 102(e) rejection based on Grushin et al., applicant argues that the reference does not apply because claim 11 has been cancelled and compounds 2a-d, 2k, 2n and 2u no longer read on the claimed compounds. This argument is not persuasive because Grushin's compounds 2a-d, 2k, 2n and 2u meet the limitations of the compound as required by present claims 1, 2, 10 and 12-14.

With respect to the 35 U.S.C. 102(e) rejection based on Ma et al. or Thompson et al., applicant argues that Ma's compounds 10-12 no longer read on the claimed compounds, and that Ma's most analogous ligand and Thompson's ancillary ligand lack the R<sup>6</sup> substituent and ring forming properties of the claims. This argument is not persuasive. While Ma's compound 11 does not meet the limitations of the compound required by any of the present claims, Ma's compounds 10 and 12 meet the limitations of the compound required by present claims 1, 2 and 12-14. Applicant's arguments regarding the R<sup>6</sup> substituent and ring forming properties appear to refer to limitations in present claim 9. Claim 9 was (and is) not rejected as anticipated by Ma et al. or Thompson et al.

With respect to the 35 U.S.C. 102(e) rejection based on Kamatani et al., applicant's arguments are not clear as to how the present claims patentably distinguish over the prior art. Of the six specific compounds of Kamatani et al. that were referenced by the examiner in the Office action mailed June 15, 2006, two (Nos. 612 and 616) meet the limitations of the compound required by present claims 1, 2 and 12-14, and two (Nos. 387 and 612) are derived from the compound of present claim 19.



With respect to the 35 U.S.C. 103(a) rejection based on Ise et al. in view of Igarashi et al., it appears from applicant's arguments that applicant may be looking at Igarashi (US 2002/0134984) as the secondary reference instead of Igarashi et al. (US 2001/0019782). The Igarashi et al. '782 publication teaches that a diketone ligand may be used in combination with substituted or unsubstituted phenylpyridine ligands, and disclose a diketone ligand formula that provides for ligands within the scope of formula III as defined in present claim 9. With respect to applicant's remarks regarding the R<sup>6</sup> substituent group with ring forming capability, while R<sup>6</sup> may form a ring with R<sup>5</sup>, ring formation is not required per claim 9. Ise et al. in view of Igarashi et al. '782 suggest compounds as required by present claim 9 wherein R<sup>6</sup> is selected from alkyl, aryl, alkylaryl or heterocyclic groups.

With respect to the 35 U.S.C. 103(a) rejection based on Ma et al. or Thompson et al., applicant argues that the rejection relies on conclusions that a skilled practitioner would know to add an R<sup>6</sup> substituent to an acac ligand, or to add or recombine substituents to arrive at the invention. Applicant argues that the rejection is based on hindsight reconstruction. The examiner notes that the rejected claims (claims 17-19) do not require an acac ligand having an R<sup>6</sup> substituent. Regarding combinations of substituents, applicant's arguments appear to ignore the teachings of the applied prior art.

With respect to the 35 U.S.C. 103(a) rejection based on Kamatani et al., applicant argues that the rejection fails for the same reasons as the rejection based on Ma et al. or Thompson et al. Kamatani's formula 5 generically provides for an acac ligand and substituted derivatives thereof. Kamatani's specific examples include compounds having a substituted acac ligand of formula III

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as defined in present claim 9 (examples include ligands of formula III wherein R<sup>6</sup> is alkyl or fluorine) and two substituted or unsubstituted phenylpyridine ligands. Kamatani's specific examples include compounds having a heptafluoro-acac ligand as required by present claims 20 and 21 and two substituted or unsubstituted phenylpyridine ligands. While Kamatani et al. do not disclose a specific example of a compound having a substituted acac ligand of formula III such as heptafluoro-acac and the two substituted phenylpyridine ligands required by present formula I, the required ligands are all taught by Kamatani et al.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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19. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 7:00 a.m. to 3:30 p.m. Monday-Friday.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY  
February 22, 2007



MARIE YAMNITZKY  
PRIMARY EXAMINER

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